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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Uwe Krohn

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EXAMINER

LIANG, GWEN

ART UNIT

PAPER NUMBER

2162

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/089,794	<b>Applicant(s)</b> KROHN ET AL.	
	<b>Examiner</b> GWEN LIANG	<b>Art Unit</b> 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to communications through the applicant's amendment, filed on 02/21/2006.

### ***Specification***

2. The abstract of the disclosure is objected to because certain text is missing after "one or more" in line 5. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01.

5. Regarding independent claim 1, the omitted elements are: means for presenting to a user the identified query term and receiving from a user a query with identified query term to trigger a further search, as disclosed in the specification page 5, paragraphs 1 and 2, page 15, line 19 – page 16, line 20.

The aforementioned essential elements are disclosed in specification (pages 5, 15-16) are not claimed in order to achieve means for "providing an information retrieval tool search result output obtained by use of said identified query term". In the analysis means, a recorded query term is identified having a weighting in excess of a

Art Unit: 2162

predetermined threshold. However, without a functional element being claimed to bridge the gap between the analysis means and the output providing means, a search result will not be obtained by use of said identified query term as claimed. In another word, when a query term is identified as having a weighting in excess of said predetermined threshold in the analysis means, it is only a query term recorded in the data store. Without a user initiating a query by specifying a query term which is identified as highly weighted, no search output will be generated by use of said identified query term at all. Furthermore before a user may specify which identified query term to use in a query, the user has to have knowledge of at least one identified query term (identified as having a weighting in excess of a predetermined threshold). Otherwise the output retrieved will not be based on said identified query term as claimed.

Independent claims 7, 13 and 15 are rejected on grounds corresponding to the reasons given above for claim 1.

6. Claims 5, 7-11, and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the subject matter "said search criteria" in lines 1-2 of the claim. There is insufficient antecedent basis for this limitation in the claim. The subject matter "said search criteria" is not exactly found in any of the preceding features in the claim or those in the parent claim.

Regarding independent claim 7, the claimed step (vi) of "identifying ... having a weighting" renders the claim indefinite because it is unclear to the examiner what the object of "identifying" is or what the subject of "having a weighting" is.

Independent claim 7 recites the subject matter "identified query term" in step (vii) of the claim. There is insufficient antecedent basis for this subject matter in the claim. The subject matter "identified query term" is not exactly found in any of the preceding features in the claim.

Independent claim 13 recites the subject matter "said store of weighted search criteria" in the second limitation of the claim. There is insufficient antecedent basis for this subject matter in the claim. The subject matter "said store of weighted search criteria" is not exactly found in any of the preceding features in the claim.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liddy et al., "Liddy" (U.S. Patent No. 5,963,940), and in view of Bowman et al., "Bowman" (WO Patent No. 99/45487).

With respect to claim 7, Liddy discloses a method ...comprising:

(i) detecting submission by a user of a query term to an information retrieval tool, and a corresponding response from the retrieval tool (Abstract, "The user enters a query and the system processes the query to generate an alternative representation..."; "After processing the query, the system displays query information to the user, indicating the system's interpretation and representation of the content of the query. The user is then given an opportunity to provide input, in response to which the system modifies the alternative representation of the query. Once the user has provided desired input, the possibly modified representation of the query is matched to the relevant document database, and measures of relevance generated for the documents. A set of documents is presented to the user..."; col. 32, lines 46-48, "Matcher 55 takes the QP-based query representation, either unmodified or modified by the user as described above, and finds suitably similar documents in a range of databases.");

(ii) detecting an indication by the user as to the relevance of a set of information identified in the response from the retrieval tool (Abstract, "A set of documents is presented to the user, who is given an opportunity to select some or all of the documents, typically on the basis of such documents being of particular relevance");

(iii) storing in a data store a reference to the set of information indicated as being relevant at (ii) (col. 27, line 67 – col. 28, line 6, "...a number occur after the documents are retrieved (including retrieval and display criteria selection, the display of relevant documents in various formats, the marking of relevant documents, the construction of new, informed queries based on the contents of documents deemed highly relevant, and printing or storing marked documents..."), and a record of the query

Art Unit: 2162

term submitted by the user at (i) (col. 32, lines 43-45, 'The user can also click the "Return to Request" button 370i and modify the query' wherein it is inherent that the query is stored in the system for the user to be able to go back to modify the query, wherein 'query' is analogous to 'search criterion');

However Liddy does not explicitly disclose selecting and calculating, for every selected set of information, a weighting associated with every query term, said weighting indicative of the proportion of users who identified the selected set of information and indicated that it was relevant; identifying ... a weighting in excess of a predetermined threshold; providing ... output ... by use of said identified query term.

Bowman discloses the steps of:

(iv) selecting one or more: sets of information referenced in the data store; (v) calculating, calculating, for every selected set of information, a weighting associated with every query term, said weighting indicative of the proportion of users who, on submitting the query term to the information retrieval tool, identified the selected set of information and indicated that it was relevant (page 3, lines 6-9, "The scores in the rating table preferably reflect, for a particular item and term, how often users have selected the item when the item has been identified in query results produced for queries containing particular term"; Figures 3 and 4, wherein the scores are analogous to weighting; Figure 8, steps 803, 804);

(v) identifying, in respect of said one or more selected sets of information from (v) having, in respect of each said selected set of information, a weighting in excess of a predetermined threshold (page 3, lines 18-21, "On the other hand, in

Art Unit: 2162

embodiments in which the goal is to select a few items in the query result having the largest ranking values, the facility preferably loops through the terms in the query, and, for each item, identifies the top few rating scores for that term and any item "; page 14, line 17 – page 15, line 3, "In step 806, the facility combines the scores for the current item to generate a ranking value for the item. As an example, with reference to Figure 6, in processing datum having item identifier "1883823064", the facility combines the score "116" extracted from entry 602 for this item and the term "dynamics", and the score "211" extracted from entry 605 for this item and the term "human". Step 806 preferably involves summing these scores. These scores may be combined in other ways, however. In particular, scores may be adjusted to more directly reflect the number of query terms that are matched by the item, so that items that match more query terms than others are favored in the ranking. In step 807, if any items remain to be processed, the facility loops back to step 801 to process the next item, else the facility continues in step 808. In step 808, the facility displays the items identified in the query result in accordance with the ranking values generated for the items in step 806. Step 808 preferably involves sorting the items in the query result in decreasing order of their ranking values, and/or subsetting the items in the query result to include only those items **above a threshold ranking value**, or only a predetermined number of items having the highest ranking values. After step 808, these steps conclude"; Figure 6); and

(vii) providing an information retrieval tool search result output obtained by use of said identified query term (page 3, lines 21-23, "The facility then combines the scores identified for each item to generate ranking values for a relatively small number of items,



Art Unit: 2162

which may include items not identified in the query result”; page 14, line 17 – page 15, line 3, wherein the query result include those items wherein the weighting scores associated with the query terms (such as human” and “dynamics”), in respect of each selected item, are above a threshold ranking value).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a method of selecting and calculating, for every selected set of information, a weighting associated with every query term, said weighting indicative of the proportion of users who identified the selected set of information and indicated that it was relevant; identifying ... a weighting in excess of a predetermined threshold; providing ... output ... by use of said identified query term, as disclosed in Bowman into the method of accessing sets of information as disclosed by Liddy to provide a technique for displaying items relating to at least some of the terms in a query even when no items completely match the query (page 2, lines 13-15). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 8 is rejected for the reasons set forth hereinabove for claim 7, and furthermore the combination of Liddy and Bowan discloses a method wherein, at (iv), each said selected set of information is representative of the same category of information (Liddy, Figure 7) and wherein the method includes (viii) using said identified one or more query terms to search for further sets of information in said category of information (Bowen, page 3, line 18- page 4, line 3).

Claim 9 is rejected for the reasons set forth hereinabove for claim 7 and furthermore Liddy discloses a method wherein, at (ii), said indication comprises accessing a set of information identified in the response from the retrieval tool (Abstract).

Claim 10 is rejected for the reasons set forth hereinabove for claim 9 and furthermore Bowman discloses a method wherein, at (ii), detecting said indication includes measuring the time spent by the user in accessing said set of information (page 4, lines 15-16).

Claim 11 is rejected for the reasons set forth hereinabove for claim 10 and furthermore Bowman discloses a method wherein, at step-(iv), said weighting is adjusted according to the measurements of time spent by users in accessing the respective selected set of information (page 4, lines 13-16).

Claim 1 is rejected on grounds corresponding to the reasons given above for claim 7 and furthermore the combination of Liddy and Bowman discloses an apparatus having:

a computer having a user interface providing access to at least one information retrieval tool (Liddy , col. 4, lines 13-15, "FIG. 8 is a screen shot showing the general features common to most screens used in the graphic user interface (GUI)"; col. 7, lines

Art Unit: 2162

35-46, "User interface software 70 allows the user to interact with the system. The user interface software is responsible for accepting queries, which it provides to processing engine 50. The user interface software also presents the retrieved documents as a result of the query to the user and reformats the output in response to user input. User interface software 70 is preferably implemented as a graphical user interface (GUI), and will often be referred to as the GUI");

a computer store for recording data relating to information retrieval by users (Liddy , col. 6, lines 60-67, "The server's storage subsystem 35, as shown in FIG. 1, maintains the basic programming and data constructs that provide the functionality of the DR-LINK system. DR-LINK software is designed to (1) process text stored in digital form (documents) or entered in digital form on a computer terminal (queries) to create a database file recording the manifold contents of the text, and (2) match discrete texts (documents) to the requirements of a user's query text.").

Claims 2 and 3 are rejected on grounds corresponding to the reasons given above for claims 9 and 7.

Claim 4 is rejected for the reasons set forth hereinabove for claim 1, and furthermore Bowan discloses an apparatus, wherein said analysis means are further arranged to receive one or more query terms from said user interface, to identify a second group comprising one or more sets of information referenced in said store for which said received one or more query terms have a weighting in excess of said

predetermined threshold, and to identify one or more further recorded query terms having, in respect of each member of said second group, a weighting in excess of said predetermined threshold (page 3, line 18- page 4, line 3).

Claim 5 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Liddy discloses an apparatus wherein said search criteria include words or word phrases and wherein said monitoring means are operable to record words from said one or more search criteria in a stemmed form (col. 5, lines 8-15).

Claim 6 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Bowman discloses an apparatus wherein said analysis means include grouping means to identify one or more information categories represented by sets of information referenced in said store, to associate one or more of said referenced sets of information representative of the same information category, and wherein said analysis means are arranged to identify those recorded query terms having, for each of said associated sets of information, a weighting in excess of said predetermined threshold (page 3, line 18- – page 4, line 3, page 14, line 17 – page 15, line 3).

Claim 12 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Liddy discloses an apparatus wherein said group comprises at least one set of information representative of a particular category of information (Figure 16).

With respect to claim 13, Liddy discloses a method ...comprising:

for each and every item of stored information, maintaining a store of query terms previously used by plural users (col. 32, lines 43-45, 'The user can also click the "Return to Request" button 370i and modify the query' wherein it is inherent that the query is stored in the system for the user to be able to go back to modify the query, wherein 'query' is analogous to 'search criterion') and

However Liddy does not explicitly disclose a store of query terms individually weighted to represent the proportion of prior users who are considered to have found a respectively associated stored item of information to be relevant to a particular query term, and providing an information retrieval tool output to a user of a user-input query term using said store of weighted search criteria.

Bowman discloses limitations of:

a store of query terms individually weighted to represent the proportion of prior users who are considered to have found a respectively associated stored item of information to be relevant to a particular query term (page 3, lines 6-9, "The scores in the rating table preferably reflect, for a particular item and term, how often users have selected the item when the item has been identified in query results produced for queries containing particular term"; Figures 3 and 4, wherein the scores are analogous to weighting; Figure 8, steps 803, 804); and

providing an information retrieval tool output to a user of a user-input query term using said store of weighted search criteria (page 3, lines 21-23, "The facility then combines the scores identified for each item to generate ranking values for a relatively small number of items, which may include items not identified in the query result"; page

Art Unit: 2162

14, line 17 – page 15, line 3, wherein the query result include those items wherein the weighting scores associated with the query terms (such as human” and “dynamics”), in respect of each selected item, are above a threshold ranking value).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a method of a store of query terms individually weighted to represent the proportion of prior users who are considered to have found a respectively associated stored item of information to be relevant to a particular query term, and providing an information retrieval tool output to a user of a user-input query term using said store of weighted search criteria, as disclosed in Bowman into the method of accessing sets of information as disclosed by Liddy to provide a technique for displaying items relating to at least some of the terms in a query even when no items completely match the query (page 2, lines 13-15). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 14 is rejected for the reasons set forth hereinabove for claim 13 and furthermore Bowman discloses a method wherein, said weighted query terms represent a binary-valued thresholded determination (Figures 3 and 4, wherein the scores are analogous to weighting; Figure 8, steps 803, 804).

Claims 15 and 16 are rejected on grounds corresponding to the reasons given above for claims 13 and 14.

***Response to Arguments***

9. Applicant's arguments with respect to all the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2162

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 571-272-4038. The examiner can normally be reached on 9:30 A.M. - 5:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

30 March 2006  
G.L.

*John S. Hession*  
Primary Examiner  
Art Unit 2167